

July 30, 2015

BY EFILE

Paul E. Blais
Chief, Systems Analysis Branch
Satellite Division, International Bureau
Federal Communications Commission
445 12th St., SW
Washington, DC 20554

Re: Call Sign E150095
IBFS File No. SES-LIC-20150616-00357

Dear Mr. Blais:

Higher Ground LLC (“Higher Ground”), by its counsel, submits the following response to the FCC International Bureau’s Satellite Division letter, dated July 27, 2015, regarding the above-referenced application.¹ As an initial matter and consistent with the Satellite Division letter’s determination, Higher Ground clarifies that it is seeking authority for earth station communications only with the following three satellites on the Commission’s Permitted Space Station list: Galaxy 3-C at 95.05° W.L., Galaxy 12 at 129° W.L., and Galaxy 19 at 97° W.L.

Below we restate the four questions raised in the Satellite Division letter and provide responses:

1. *Please provide a representative depiction of the SatPaq terminal in order to assist in analyzing the radiation hazard assessment.*

As noted in the Technical Appendix to the application, the SatPaq terminals comply with the applicable maximum permissible exposure limits specified in 47 C.F.R. § 1.1310, and Higher Ground’s showing is consistent with the FCC’s KDB Publication 447498 D01 (Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies). A depiction follows:

¹ See Letter from Paul E. Blais, Chief, Systems Analysis Branch, Satellite Division, International Bureau, FCC, to Adam Krinsky, counsel to Higher Ground, IBFS File No. SES-LIC-20150616-00357, DA 15-864 (July 27, 2015).

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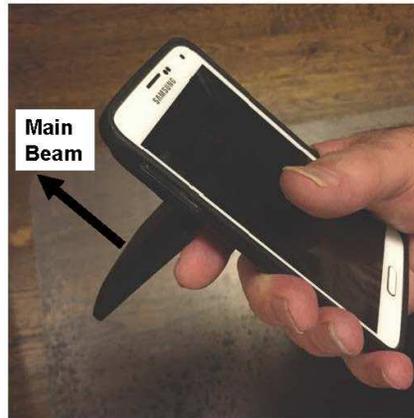


Figure 1. A SatPaq model, embedded in a smartphone case, with the antenna deployed for operation

As described in the Technical Appendix, a proximity sensor chip is incorporated into the SatPaq antenna. In the event that an object or person is positioned within 20 cm in front of the SatPaq antenna, this chip will initiate a binary disable signal that will terminate transmissions until the blockage in front of the SatPaq antenna is cleared.

2. *Please provide any test results supporting the effectiveness of using the ULS based fixed station location data and Higher Ground LLC SatPaq terminal operations logged by the remote control facilities.*

All testing to date has been conducted at 5927.5 MHz in Redwood City, CA, within the Palo Alto, CA area authorized under an experimental license (Call Sign WH2XHP). This testing is within a frequency channel (5925-5930 MHz) that is lightly used by terrestrial point-to-point operational fixed services. Higher Ground has used the ULS database to confirm that there are no point-to-point operational fixed licensees or applicants in the 5925-5930 MHz band within 125 miles of Redwood City. Higher Ground has a pending application to modify its experimental authorization (File No. 0124-EX-ML-2015) to allow SatPaq test operations using self-coordination.

3. *Higher Ground LLC identified the SatPaq terminal class of station as a Mobile Earth Terminal (MET) in Item 25 of Form 312. Although the application requests waiver of Note 6 to 47 C.F.R. § 101.147(a), which prohibits assignment of the 5925-6425 MHz band to mobile earth stations, we also note that the requested frequency bands are not allocated for mobile satellite service in the Table of Frequency Allocations of the Commission rules, Section 2.106, 47 C.F.R. § 2.106. See 47 C.F.R. § 25.112 (a)(2). Please indicate whether Higher Ground also seeks waiver of this rule.*

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To the extent appropriate, Higher Ground requests a waiver of the Table of Frequency Allocations set forth in 47 C.F.R. § 2.106, so as to permit the proposed mobile earth station operations as an application of the Fixed-Satellite Service (“FSS”) allocation. The Commission may waive its rules upon good cause, 47 C.F.R. § 1.3, when a waiver would not undermine the policy objective of the rule and would better serve the public interest than requiring strict compliance.² Grant of the requested waiver would be consistent with the existing FSS allocation. In fact, the FCC has found that similar mobile earth stations, such as vehicle-mounted earth stations and earth stations aboard aircraft, are permissible applications of the FSS, even though they operate on mobile platforms while in motion or at unspecified location points.³ Moreover, a waiver would better serve the public interest by allowing Higher Ground to introduce innovative, low-cost satellite-based consumer and Internet-of-things communications services across the United States, while making more efficient use of spectrum resources without causing harmful interference.

Alternatively, Higher Ground requests a change in the proposed class of station to permit operation of the SatPaqs as temporary fixed earth stations in the FSS. Such temporary fixed operations will comply with the FCC’s rules regarding temporary fixed earth stations,⁴ except with respect to coordination requirements for which a waiver is sought in the application.

4. *Please provide a 24/7 point of contact for resolution of any possible interference issues.*

As noted in our response to Question E2 of FCC Form 312, Schedule B, the point of contact for the proposed operations is Mr. Dave Daugherty (that response also provides a mobile telephone number for him). We confirm here that Mr. Daugherty is available to address any possible interference issues on a 24-hour, 7-day basis. There is a single SatPaq Network Control that will interface with the gateway earth stations in Napa, CA and Hagerstown, MD. The contact telephone number for each gateway earth station also is specified in the response to Question E65 of FCC Form 312, Schedule B.

² See *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1166 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

³ See *Amendment of Parts 2 and 25 of the Commission’s Rules to Allocate Spectrum and Adopt Service Rules and Procedures to Govern the Use of Vehicle-Mounted Earth Stations in Certain Frequency Bands Allocated to the Fixed-Satellite Service*, Report and Order, 24 FCC Rcd 10414, ¶ 1 (2009); *Revisions to Parts 2 and 25 of the Commission’s Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands*, Notice of Proposed Rulemaking and Report and Order, 27 FCC Rcd 16510, ¶¶ 2, 12 (2012).

⁴ See 47 C.F.R. § 25.277.

